

Claims

- [c1] 1. A linear guiding apparatus, comprising:
a shaft; and
a shaft holding apparatus adapted to slide along the shaft, wherein the shaft holding apparatus comprises:
a body which has a V-shape supporting surface, wherein the V-shape supporting surface is along the axis of the shaft and supports the outer edge of the shaft;
an elastic member mounted on the body, wherein the elastic member is elastically contacted the outer edge of the shaft, and wherein the shaft is clipped between the elastic member and the V-shape supporting surface; and
an adjusting member mounted on the body and contacted the elastic member, wherein the adjusting member is utilized to adjust the position of the elastic member so that the shaft of any diameter can be clipped between the elastic member and the V-shape supporting surface.
- [c2] 2. The linear guiding apparatus according to claim 1, wherein the elastic member includes a leaf spring.
- [c3] 3. The linear guiding apparatus according to claim 1, wherein the adjusting member includes a screw.
- [c4] 4. The linear guiding apparatus according to claim 1, wherein the body has a lead screw and the elastic member and the adjusting member are mounted on the lead screw, and wherein the elastic member includes a leaf spring and the adjusting member includes a nut.
- [c5] 5. A linear guiding apparatus, comprising:
a shaft; and
a shaft holding apparatus adapted to slide along the shaft, wherein the shaft holding apparatus comprises:
a body which has a V-shape supporting surface, wherein the V-shape supporting surface is along the axis of the shaft and supports the outer edge of the shaft;
an adjusting member mounted on the body; and

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- [c11] 11. The shaft holding apparatus according to claim 10, wherein the elastic member includes a leaf spring.
- [c12] 12. The shaft holding apparatus according to claim 10, wherein the adjusting member includes a screw.
- [c13] 13. The shaft holding apparatus according to claim 10, wherein the body has a lead screw and the elastic member and the adjusting member are mounted on the lead screw, and wherein the elastic member includes a leaf spring and the adjusting member includes a nut.
- [c14] 14. A shaft holding apparatus, adapted to slide along a shaft, the shaft holding apparatus comprising:
a body which has a V-shape supporting surface, wherein the V-shape supporting surface is along the axis of the shaft and supports the outer edge of the shaft;
an adjusting member mounted on the body; and
an elastic member mounted on the adjusting member,
wherein the adjusting member is utilized to adjust the position of the elastic member so that the elastic member is elastically contacted the outer edge of the shaft, the shaft of any diameter can be clipped between the elastic member and the V-shape supporting surface.
- [c15] 15. The shaft holding apparatus according to claim 14, wherein the elastic member includes a washer.
- [c16] 16. The shaft holding apparatus according to claim 14, wherein the elastic member includes a spring.
- [c17] 17. The shaft holding apparatus according to claim 14, wherein the adjusting member includes a screw.
- [c18] 18. The shaft holding apparatus according to claim 14, wherein the adjusting member includes a plurality of orientation slot pairs, wherein the orientation slot pairs are formed on the body, and the distance between the shaft and each of the orientation slot pairs are different, wherein the elastic member includes a

leaf spring, and the two ends of the leaf spring is inserted to one of the orientation slot pairs so that the leaf spring is bent to be elastically contacted the shaft.